

TAXONOMIC STUDY ON THE GENUS ASCELOSODIS REDTENBACHER (COLEOPTERA, TENEBRIONIDAE)

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Abstract All species of the genus *Ascelosodis* Redtenbacher, 1868 are listed. Three new species, *A. granata* sp. nov., *A. zhengi* sp. nov. and *A. baingoinana* sp. nov. are described from the Tibetan Plateau, China. A key to the species of *Ascelosodis* is given. Type specimens are deposited in the Museum of Hebei University.

Key words Coleoptera, Tenebrionidae, Eurymetopini, new species, identification key, Tibet, China.

The genus *Ascelosodis* was erected by Redtenbacher (1868) with the type species *A. serripes* Redtenbacher, 1868. So far, 22 species were reported (Redtenbacher, 1868; Bates, 1879; Fairmaire, 1891; Blair, 1923; Reimig, 1931; Gridelli, 1934; Koch, 1943, 1948; Kaszab, 1959, 1961, 1965, 1968; Kaszab *et al.*, 1978; Ren & Shi, 2006), of which 13 species were described from the Tibetan Plateau, China. All the species of the genus are distributed in higher altitudes of the Tibetan Plateau and adjacent areas.

During the identification of the tenebrionid specimens collected from the Tibetan Plateau of China in 2002 and 2004, three new species of the genus *Ascelosodis*, *A. granata* sp. nov. from Gertse and Gergye, *A. zhengi* sp. nov. from Lhartse and Tingri and *A. baingoinana* sp. nov. from Palgon were discovered and described below.

Ascelosodis assimilis Bates, 1879

Ascelosodis assimilis Bates, 1879: 468; Blair, 1923: 281; Kaszab, 1959: 361; 1968: 49.

Gnathosia punctatissima Reitter, 1915: 62.

Distribution. Kashmir.

Ascelosodis baingoinana sp. nov.

Distribution. China (Tibet, Paingion).

Ascelosodis ciliatis Bates, 1879

Ascelosodis ciliatis Bates, 1879: 468; Blair, 1923: 281; Kaszab, 1959: 361; 1968: 49; 1978: 220, Fig. 4.

Distribution. Kashmir.

Ascelosodis concinnus Bates, 1879

Ascelosodis concinnus Bates, 1879: 468; Blair, 1923: 281; Koch, 1948: 77; Kaszab, 1959: 359; 1968: 51; Doyen, 1993: 480.

Orocina semenovi Reitter, 1896: 303.

Distribution. Pamir, between Sirikol and Panga.

Ascelosodis emarginiventris Koch, 1948

Ascelosodis emarginiventris Koch, 1948: 76; Kaszab, 1959: 359; 1968: 49;

Ren & Shi, 2006: 11–12, Figs 40–54, 149.

Distribution. China (Tibet); India.

Ascelosodis emarginata Ren et Shi, 2006

Ascelosodis emarginata Ren & Shi, 2006: 4–7, Figs 1–13, 146.

Distribution. China (Tibet).

Ascelosodis everestina Blair, 1923

Ascelosodis everestina Blair, 1923: 278; Kaszab, 1959: 361; 1965: 108, Figs. 4–5; 1968: 50; Ren & Shi, 2006: 12–13, Figs. 55–67, 144, 150.

Distribution. China (Tibet); Sikkim.

Ascelosodis forsteri Kaszab, 1961

Ascelosodis forsteri Kaszab, 1961: 214, Figs. 7–8; 1968: 50.

Distribution. Nepal.

Ascelosodis granata sp. nov.

Distribution. China (Tibet, Geze).

Ascelosodis grandis Bates, 1879

Ascelosodis grandis Bates, 1879: 469; Blair, 1923: 281; Kaszab, 1959: 361; 1968: 49; 1978: 220, Fig. 3.

A. wadeus Fairmaire, 1891: 92.

Distribution. Kashmir.

Ascelosodis haagi Bates, 1879

Ascelosodis haagi Bates, 1879: 469; Blair, 1923: 281; Kaszab, 1959: 361; 1968: 50; Ren & Shi, 2006: 13–14, Figs. 68–80, 143, 151.

Distribution. China (Tibet); Kashmir.

Ascelosodis intermedia Bates, 1879

Ascelosodis intermedia Bates, 1879: 469; Blair, 1923: 281; Kaszab, 1959: 360; 1968: 50.

Distribution. Kashmir.

Ascelosodis kochi Kaszab, 1959

Ascelosodis kochi Kaszab, 1959: 357, pl. I, Fig. 6; 1968: 52–53, Figs. 24, 26.

Distribution. Afghanistan.

The research was supported by the National Natural Science Foundation of China (30570209).

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Received 2 Mar. 2007, 21 Apr. 2007.

Ascelosodis lindbergi Kaszab, 1968*Ascelosodis lindbergi* Kaszab, 1968: 52-54, Figs 23, 25.

Distribution. Afghanistan.

Ascelosodis longstaffi Blair, 1923*Ascelosodis longstaffi* Blair, 1923: 281; Kaszab, 1959: 361; 1968: 51; Ren & Shi, 2006: 4.

Distribution. China (Tibet).

Ascelosodis minor Kaszab, 1978*Ascelosodis minor* Kaszab, 1978: 218-233, Figs. 5-7.

Distribution. Kashmir.

Ascelosodis nitida Blair, 1923*Ascelosodis nitida* Blair, 1923: 281; Kaszab, 1959: 358; 1968: 48. Ren & Shi, 2006: 14-15, Figs 8+93, 152.

Distribution. China (Tibet); Sikkim.

Ascelosodis punctulata Ren et Shi, 2006*Ascelosodis punctulata* Ren & Shi, 2006: 7-9, Figs 14-26, 141, 147.

Distribution. China (Tibet).

Ascelosodis reinigi Koch, 1948*Ascelosodis reinigi* Koch, 1948: 78; Kaszab, 1959: 360; 1968: 51; Ren & Shi, 2006: 16-17, Figs 94-101, 153.

Distribution. China (Tibet); India.

Ascelosodis rugulosa Ren et Shi, 2006*Ascelosodis rugulosa* Ren & Shi, 2006: 9-11, Figs. 27-39, 142, 148.**Ascelosodis schmidi Kaszab, 1965***Ascelosodis schmidi* Kaszab, 1965: Figs. F-3; 1968: 51; Ren & Shi, 2006: 16-17, Figs 102-114, 145, 154.

Distribution. China (Tibet); Sikkim.

Ascelosodis serripes Redtenbacher, 1868*Ascelosodis serripes* Redtenbacher, 1868: 118; Bates, 1879: 468; Blair, 1923: 280; Koch, 1948: 77; Kaszab, 1959: 359; 1968: 49; 1978: 220, Fig. 2; Ren & Shi, 2006: 17-18, Figs. 115-127, 155.

Distribution. China (Tibet); Kashmir.

Ascelosodis thibetana Blair, 1923*Ascelosodis thibetana* Blair, 1923: 281; Kaszab, 1959: 358; 1968: 48; Ren & Shi, 2006: 18-19, Figs 128-140, 156.

Distribution. China (Tibet).

Ascelosodis waltoni Blair, 1923*Ascelosodis waltoni* Blair, 1923: 280; Koch, 1948: 77; Kaszab, 1959: 359; 1968: 51; Ren & Shi, 2006: 3.

Distribution. China (Tibet).

Ascelosodis zhengi sp. nov.

Distribution. China (Tibet, Lharze).

Key to the species of Ascelosodis

1. Posterior angles of pronotum clearly rectangular 2
Posterior angles of pronotum obtuse or rounded 3
2. Body moderately shiny. Lateral margins of pronotum rounded in the middle. Sides of prothorax and elytra sparsely ciliate beneath. Pronotum and elytra strongly punctate. Body length 7.2-8.9 mm
..... *A. thibetana* **Blair**
- Body noticeably shiny. Lateral margins of pronotum slightly rounded. Sides of prothorax and elytra densely ciliate beneath. Pronotum and elytra

- feebly and sparsely punctate. Body length 6.6-8.7 mm
..... *A. nitida* **Blair**
3. Posterior margin of visible abdominal ventrite 5 with a triangular incision. Pronotum widest in the middle, anterior angles acute, posterior ones rounded. Elytral base only bordered laterally, shoulders not prominent. Body length 6.2-8.1 mm *A. emarginiventris* **Koch**
 - Posterior margin of visible abdominal ventrite 5 rounded, without triangular incision 4
 4. Clypeal lobe of head obviously prominent, in most case, separated from lateral lobes by deep incisions 5
Clypeal lobe of head weakly prominent, nearly continuous with lateral lobes 19
 5. Humeral angles of elytra rounded 6
Humeral angles of elytra distinct and somewhat prominent 12
 6. Pronotal surface between lateral margins regularly convex 7
Pronotal surface only with disc obviously convex 9
 7. Humeral angles of elytra obtuse, rounded apically. Anterior margin of clypeal lobe almost straight. Pronotum widest at the base, anterior margin and base bordered along entire length, anterior angles rectangular, posterior ones obtuse. Body length 5.8-7.0 mm
..... *A. lindbergi* **Kaszab**
 - Humeral angles of elytra absolutely rounded 8
 8. Body not shiny. Sides of prothorax and elytra not ciliate beneath. Clypeal lobe of head separated from lateral lobes by short distinct incisions. Anterior border of pronotum widely interrupted in the middle. Body length 5.5-7.5 mm *A. waltoni* **Blair**
 - Body shiny. Sides of prothorax and elytra ciliate beneath. Clypeal lobe of head not sharply divided from lateral lobes. Anterior margin of pronotum bordered along entire length. Body length 6.3-8.0 mm
..... *A. serripes* **Redtenbacher**
 9. Pronotal surface with lateral margins narrowly and steeply sloping or finely but distinctly reflexed 10
Pronotal surface with lateral margins natural, characters not as above 11
 10. Only sides of elytra with several long hairs. Pronotal surface with lateral margins narrowly and steeply sloping. Anterior margin of pronotum bordered along entire length. Body length 6.2-8.3 mm
..... *A. emarginata* **Ren et Shi**
 - Sides of prothorax and elytra ciliate beneath. Pronotal surface with lateral margins finely but distinctly reflexed. Anterior border of pronotum interrupted in the middle. Body length 6.5-7.5 mm
..... *A. concinnus* **Bates**
 11. Elytral base only bordered laterally. Borders of lateral margins of pronotum fine and obscure. Intercoxal process of prosternum with apex acute, strongly and horizontally prominent behind coxae. Body length 6.0-6.7 mm *A. reinigi* **Koch**
 - Elytral base bordered along entire length. Lateral margins of pronotum clearly bordered along entire length. Intercoxal process of prosternum with apex obtuse or rounded, sloping behind coxae. Body length 7.8-9.0 mm *A. minor* **Kaszab**
 12. Elytral base clearly bordered. Sides of prothorax and elytra ciliate beneath 13
Elytral base not bordered. Sides of prothorax and elytra with or without long hairs 15
 13. Base of pronotum distinctly broadly lobed in middle. Pronotum transverse and flat, widest immediately before the base. Head strongly wrinkled above the eyes. Elytral surface densely and slightly rugosely punctate. Body length 9.5-10.0 mm *A. grandis* **Bates**
 - Base of pronotum not lobed in middle. Pronotum strongly transverse and convex, widest in the middle 14
 14. Clypeal lobe of head separated from lateral lobes by shallow incisions. Elytral surface covered with simple punctures. Hairs of sides of prothorax and elytra relatively short and sparse. Body length 7.0-7.5 mm
..... *A. assimilis* **Bates**
 - Clypeal lobe of head separated from lateral lobes by deep incisions. Elytral surface covered with muciculate punctures. Sides of prothorax and elytra with very dense long hairs. Body length 8.0 mm
..... *A. ciliatis* **Bates**

15. Sides of prothorax and elytra not ciliate beneath 16
At least sides of elytra sparsely ciliate beneath 17
16. Body not shiny. Anterior border of pronotum interrupted in the middle. Anterior margin of clypeal lobe with several incisions. Pronotum with anterior angles rectangular. Body length 8.0-9.0 mm
..... *A. intermedia* **Bates**
Body noticeably shiny. Anterior margin of pronotum bordered along entire length. Clypeal lobe with anterior margin straight. Anterior angles of pronotum obtuse, rounded apically. Body length 7.0-7.5 mm
..... *A. kochi* **Kaszab**
17. Punctures of pronotal surface fine. Anterior angles of pronotum obtuse, rounded apically. Pronotum with anterior and posterior borders interrupted or obscure in the middle. Outer margins of epipleura not extending to shoulders. Body length 5.2-6.1 mm
..... *A. granata* **sp. nov.**
Punctures of pronotal surface strong and coarse. Anterior angles of pronotum nearly rectangular 18
18. Vertex with dense coarse punctures. Antennomere 3 elongate, much longer than antennomere 2. Lateral margins of pronotum not uprisng. Humeral angles of elytra obtuse. Elytral surface with dense coarse punctures. Body length 5.3-6.3 mm *A. punctulata* **Ren et Shi**
Vertex with dense V-shaped rugae. Antennomere 3 not elongate, about as long as antennomere 2. Lateral margins of pronotum distinctly uprisng. Humeral angles of elytra nearly rectangular. Elytral surface with dense smooth tubercles. Body length 4.9-5.7 mm
..... *A. rugulosa* **Ren et Shi**
19. Humeral angles of elytra distinct and somewhat prominent 20
Humeral angles of elytra absolutely rounded 21
20. Body elongate ovate, reddish brown, antennae and palpi red. Sides of prothorax and elytra ciliate beneath. Body length 6.9-8.0 mm
..... *A. haagi* **Bates**
Body shortly ovate, black, antennae and palpi brown. Sides of prothorax and elytra not ciliate beneath. Body length 6.0-7.0 mm
..... *A. forsteri* **Kaszab**
21. Genae sharply extending before eyes 22
Genae parallel sided before eyes or gradually widening before eyes 23
22. Antennae longer. Anterior angles of pronotum obviously rectangular. Outer apical angles of protibiae shorter than protarsi. Elytral surface almost impunctate. Body length 5.0-6.4 mm *A. everestina* **Blair**
Antennae shorter. Anterior angles of pronotum broadly rounded. Outer apical angles of protibiae almost as long as protarsi. Elytral surface densely covered with clear punctures. Body length 5.0-6.0 mm
..... *A. longstaffi* **Blair**
23. Genae as wide as eyes, and parallel-sided before eyes. Pronotum widest near the base, with anterior angles rectangular, rounded apically, posterior ones absolutely rounded; anterior and posterior borders interrupted in the middle. Body length 4.8-6.4 mm
..... *A. schmidt* **Kaszab**
Genae gradually widening before eyes 24
24. Anterior margin of clypeal lobe obviously V-shaped. Base of clypeal lobe with two spots. Antennae short, when posteriorly extended, reaching middle of pronotum. Pronotum widest behind the middle, anterior margin deeply sinuate. Body length 4.4-6.0 mm
..... *A. zhengi* **sp. nov.**
Anterior margin of clypeal lobe sinuate. Base of clypeal lobe without spot. Antennae long, when posteriorly extended, nearly reaching base of pronotum. Pronotum widest near the base, anterior margin weakly sinuate. Body length 5.8 mm *A. haingoinana* **sp. nov.**

Ascdosodis granata **sp. nov.** (Figs. 1-13, 39)

Male (Figs. 1-8). Ovate, body black to brown dorsally and reddish brown ventrally, weakly shining; antennae, legs and palpi reddish brown. Sides of prothorax and elytra ciliate beneath.

Clypeal lobe (Fig. 2) obviously prominent, anterior margin straight or weakly prominent, separated from

lateral lobes by shallow obtuse angled incisions. Genae sharply extending before eyes, outer margins arcuately converging to clypeus. Dorsal surface of head with clear punctures, denser on clypeal lobe and genae than on disc, punctures obscure at anterior margin of clypeus. Antennae (Fig. 1) strong, when posteriorly extended, nearly reaching pronotal base. Length (width) ratio of antennomeres 2 to 11 as follows: 7.1 (5.0) : 8.0 (5.0) : 6.0 (5.0) : 5.1 (5.0) : 5.1 (5.1) : 5.1 (5.1) : 6.0 (5.1) : 6.0 (7.0) : 7.2 (7.0) : 7.2 (5.5). Apical part of inner margin of antennomere 9, apical parts of inner and outer margins of antennomere 10 and apical part of antennomere 11 with dense hair and sparse long setae.

Pronotum (Fig. 3) transverse, 1.91-2.12 (1.99, on the average, $n=10$) times as wide as long, widest near the middle, 1.55-1.72 (1.62, on the average, $n=10$) times as wide as head. Lateral margins of pronotum arcuately protruding, finely bordered along entire length; anterior margin deeply sinuate, anterior and posterior borders of pronotum interrupted or obscure in the middle. Anterior angles of pronotum obtuse, rounded apically; posterior ones obtuse. Pronotal surface obviously convex, with punctures sparser on disc than on sides. Propleura with granules, each granule with a short light seta. Intercoxal process of prosternum linguiform, steeply sloping at apex.

Elytra ovate, 1.20-1.35 (1.29, on the average, $n=10$) times as long as wide, widest before the middle, 1.10-1.25 (1.18, on the average, $n=10$) times as wide as pronotum. Elytral base not bordered, humeral angles nearly rectangular and slightly prominent. Elytral surface regularly convex, with small granules. Outer margins of epipleura not extending to shoulders. Visible abdominal ventrites punctate, each puncture with a light seta.

Legs strong. Outer apical angles of protibiae elongate, extending beyond anterior margins of protarsomere 3 or protarsomere 4. Length ratio of metatarsomeres 1-4 as follows: 17.1 : 5.9 : 5.1 : 11.2.

Aedeagus (Figs. 4-6). Length 1.12 mm (when body length 5.8 mm). Parameres 0.69 mm long, 0.24 mm wide. Median lobe strong and short, apical margin straight. Apex of parameres without setae. Spiculum gastrale as in Fig. 7. Apical margin of abdominal sternite VIII deeply sinuate (Fig. 8).

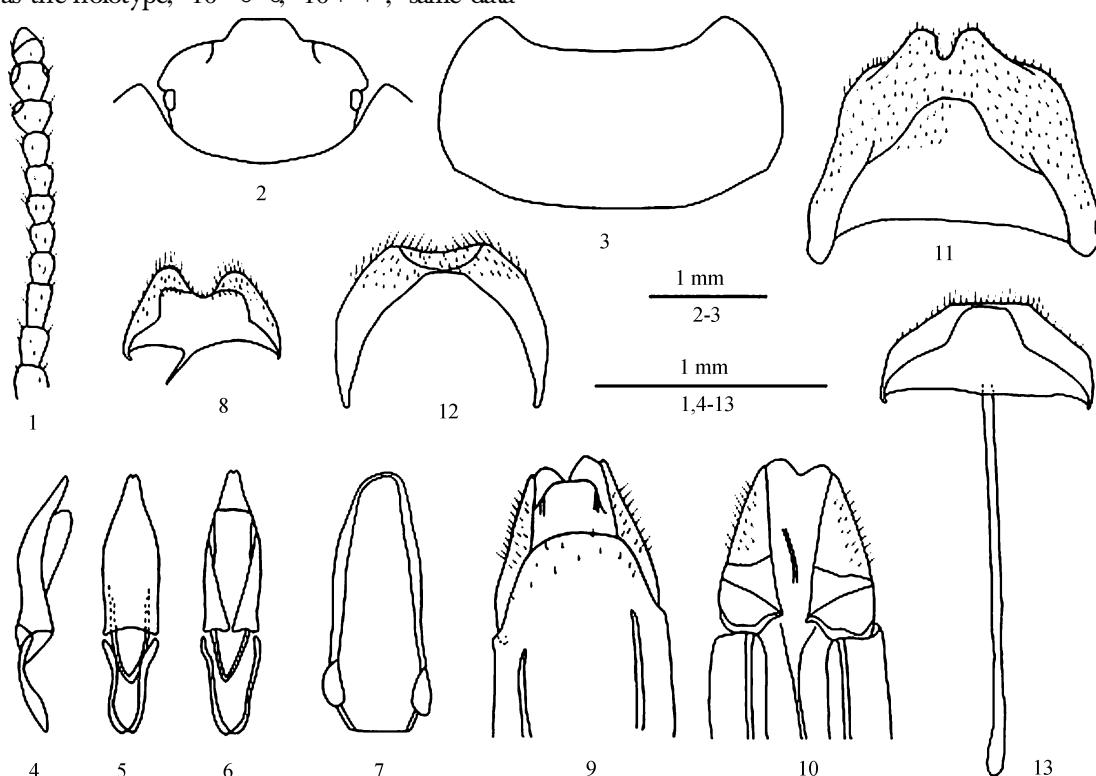
Female (Figs. 9-13). Difficult to distinguish from male by general characters. Ovipositor as in Figs. 9-10. Posterior margin of urotergite VIII (Fig. 11) with deep incision. Urosternite VIII (Fig. 12) with posterior margins very weakly sinuate. Posterior margins of spiculum ventrale (Fig. 13) straight.

Measurements. Male body length 5.2-6.1 mm, width 2.7-3.6 mm; female body length 5.2-6.3 mm, width 2.6-3.6 mm.

Holotype ♂, China, Tibet, Gerze (32°20'N,

84°07' E; alt. 4 400 m), 21 July 2004, collected by SHI Ai-Min and BA Yi-Bin. Paratypes 15 ♂♂, 15 ♀♀, same data as the holotype; 10 ♂♂, 10 ♀♀, same data

as the holotype but Gergye (32°37' N, 82°23' E; alt. 4 350-4 700 m), 19 July 2004.



Figs 1-13. *Ascelosodis granata* sp. nov. 1. Antenna. 2. Head in dorsal view. 3. Pronotum. 4-6. Aedeagus in dorsal, ventral and lateral view. 7. Spiculum gastrale. 8. Abdominal sternite VIII of male. 9-10. Ovipositor in dorsal and ventral view. 11. Urotergite VIII of female. 12. Urosternite VIII of female. 13. Spiculum ventrale.

Distribution. China, Tibet (Gertse and Gergye).

Diagnosis. The new species resembles *A. rugulosa* Ren et Shi, 2006, with the following differences: dorsal surface of head with clear punctures; antennae long, when posteriorly extended, nearly reaching pronotal base; elytral surface smooth, with small granules; Median lobe of aedeagus strong and short, apical margin straight.

Etymology. Named after the elytral surface covered with small granules.

Ascelosodis zhengi sp. nov. (Figs. 14-26, 40)

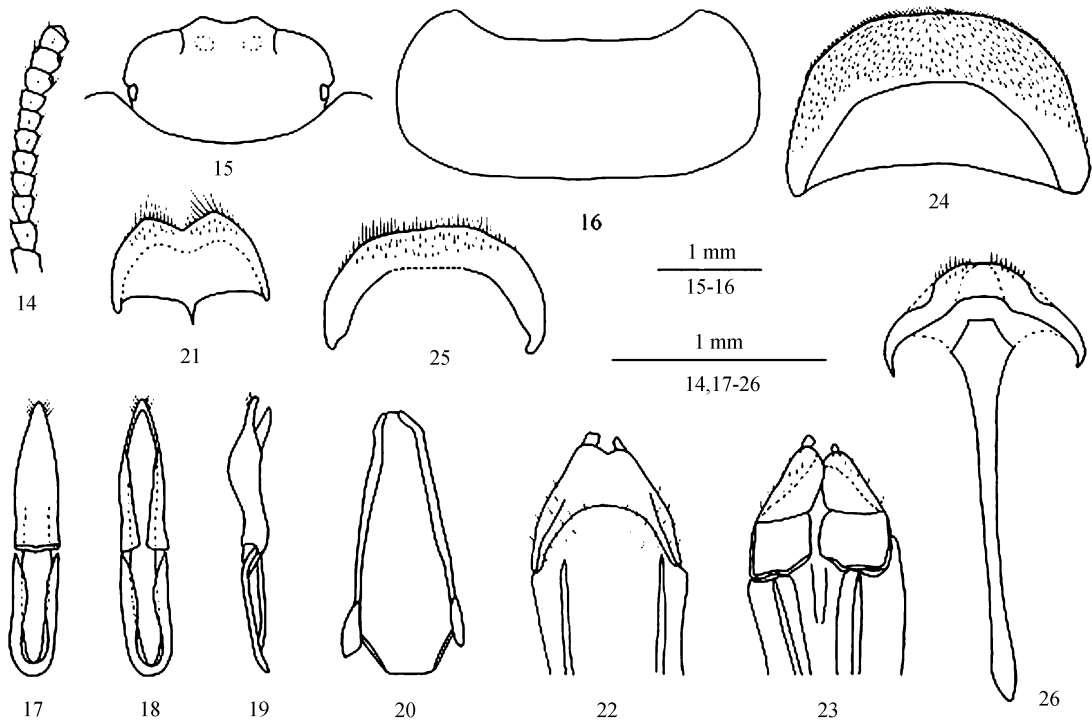
Male (Figs. 14-21). Ovate, black, weakly shining; antennae, legs and palpi pitchy brown. Sides of prothorax and elytra densely ciliate beneath.

Clypeal lobe (Fig. 15) weakly prominent, anterior margin obviously V-shaped, separated from lateral lobes by shallow obtuse-angled incisions. Genae nearly arcuate, widest immediately before eyes. Dorsal surface of head convex, punctures coarse, denser on clypeal lobe and genae than on disc, sometimes elongated and connected, obscure at anterior margin of clypeus. Base of clypeal lobe with two spots. Antennae (Fig. 14) short, when posteriorly extended, reaching middle of pronotum. Length (width) ratio of antennomeres 2 to 11

as follows: 5.1 (4.5) : 5.1 (4.2) : 4.2 (4.0) : 4.1 (4.2) : 4.1 (4.5) : 4.1 (4.5) : 4.1 (5.0) : 4.7 (6.1) : 4.2 (6.1) : 5.0 (5.2). Apical part of inner margin of antennomere 9, apical parts of inner and outer margins of antennomere 10 and apical part of antennomere 11 with dense hair and sparse long setae.

Pronotum (Fig. 16) transverse, 2.11-2.35 (2.22, on the average, $n = 10$) times as wide as long, widest behind the middle, 1.58-1.70 (1.64, on the average, $n = 10$) times as wide as head. Lateral margins of pronotum arcuately protruding, finely bordered along entire length; anterior margin deeply sinuate, bordered along entire length; base almost parallel with it, fine border widely interrupted in the middle. Anterior angles of pronotum obtuse, rounded apically; posterior ones absolutely rounded. Pronotal surface convex, with fine punctures sparser on disc than on sides. Propleura deeply concave, with sparse granules and longitudinal wrinkles. Intercoxal process of prosternum narrow, steeply sloping at apex.

Elytra ovate, 1.20-1.35 (1.27, on the average, $n = 10$) times as long as wide, widest before the middle, 1.13-1.27 (1.20, on the average, $n = 10$) times as wide as pronotum. Elytral base not bordered, humeral angles rounded. Elytral surface strongly convex, with fine



Figs 14-26. *Ascelosodis zhengi* sp. nov. 14. Antenna. 15. Head in dorsal view. 16. Pronotum. 17-19. Aedeagus in dorsal, ventral and lateral view. 20. Spiculum gastrale. 21. Abdominal sternite VIII of male. 22-23. Ovipositor in dorsal and ventral view. 24. Urotergite VIII of female. 25. Urosternite VIII of female. 26. Spiculum ventrale.

shallow punctures and irregularly branching wrinkles on disk and granules on sides. Epipleura with very sparse granules, outer margins not extending to shoulders. Visible abdominal ventrites punctate, each puncture with a short light seta.

Legs strong. Outer apical angles of protibiae obviously elongate, extending beyond anterior margins of protarsomere 4. Length ratio of metatarsomeres 1-4 as follows: 16. 2: 6. 1: 5. 2: 13. 0.

Aedeagus (Figs. 17-19). Length 1.28 mm (when body length 5.5 mm). Parameres 0.70 mm long, 0.22 mm wide. Apex of parameres pointed, with setae. Spiculum gastrale as in Fig. 20. Apical margin of abdominal sternite VIII sinuate (Fig. 21).

Female (Figs. 22-26). Elytral surface densely covered with clear punctures. Ovipositor as in Figs. 22-23. Posterior margins of urotergite VIII (Fig. 24), Urosternite VIII (Fig. 25) and spiculum ventrale (Fig. 26) arcuately prominent.

Measurements. Male body length 4.4-6.0 mm, width 2.6-3.5 mm; female body length 4.4-6.3 mm, width 2.7-3.8 mm.

Holotype ♂, China, Tibet, Lharze (29°07'N, 87°41'E; alt. 3 900 m), 29 June 2002, collected by BA Yi-Bin and YU Yang. Paratypes 5 ♂♂, 7 ♀♀, same data as the holotypes: 20 ♂♂, 20 ♀♀, same data as the holotype but Tingri (28°48'N, 86°48'E; alt. 4 300 m), 3 July 2004, collected by BA Yi-Bin and SHI Ai-Min.

Distribution. China, Tibet (Lhartse and Tingri).

Diagnosis. The new species resembles *A. schmidt* Kaszab, 1965, with the following differences: anterior margin clypeal lobe obviously V-shaped; genae widening before eyes; base of clypeal lobe with two spots; pronotum widest behind the middle, anterior margin bordered along entire length.

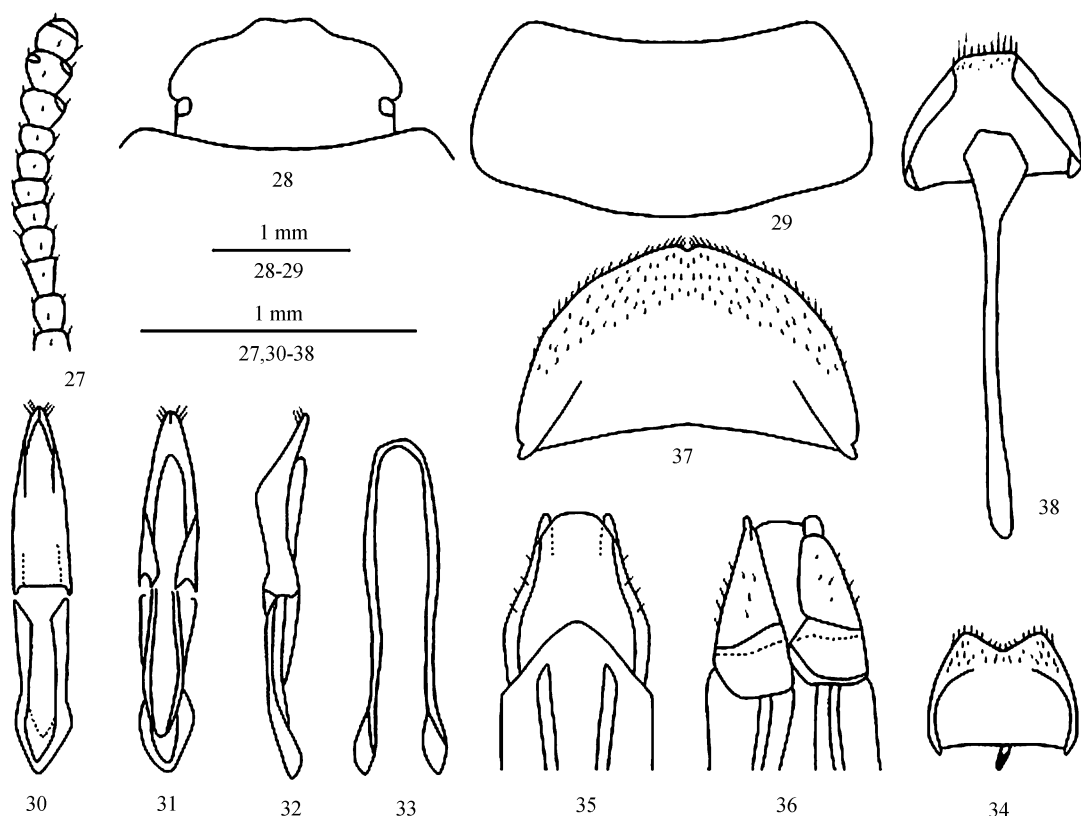
Etymology. The new species is named in honor of Prof. ZHENG Zhe Min, entomologist of China.

Ascelosodis baingoinana sp. nov. (Figs. 27-38, 41)

Male (Figs. 27-34). Body ovate, black dorsally and brown ventrally, weakly shining; antennae and legs brown. Sides of prothorax and elytra ciliate beneath.

Clypeal lobe (Fig. 28) weakly prominent, anterior margin sinuate, separated from lateral lobes by shallow obtuse angled incisions. Genae nearly arcuate, widening before eyes. Dorsal surface of head flat, punctures on disc coarse and slightly dense, not coarse and denser on clypeal lobe and genae than on disc. Antennae (Fig. 27) long, when posteriorly extended, nearly reaching base of pronotum. Length (width) ratio of antennomeres 2 to 11 as follows: 5.0 (4.0) : 7.0 (4.5) : 5.0 (4.5) : 5.0 (4.0) : 4.0 (5.0) : 4.0 (5.0) : 4.0 (5.0) : 5.0 (6.0) : 6.0 (7.0) : 6.0 (6.0). Apical part of inner margin of antennomere 9, apical parts of inner and outer margins of antennomere 10 and apical part of antennomere 11 with dense hair and sparse long setae.

Pronotum (Fig. 29) transverse, 2.22 times as wide



Figs 27-38. *Ascelosodis baingianana* sp. nov. 27. Antenna. 28. Head in dorsal view. 29. Pronotum. 30-32. Aedeagus in dorsal, ventral and lateral view. 33. Spiculum gastrale. 34. Abdominal sternite VIII of male. 35-36. Ovipositor in dorsal and ventral view. 37. Urotergite VIII of female. 38. Spiculum ventrale.

as long, widest near the base, 1.60 times as wide as head. Lateral margins of pronotum arcuately protruding, finely bordered along entire length; anterior margin weakly sinuate, bordered along entire length; base almost parallel with it, border widely interrupted in the middle. Anterior and posterior angles of pronotum rounded. Pronotal surface regularly convex, sparsely covered with very fine punctures, coarse and denser on sides than on

disc. Propleura deeply concave, with very sparse granules and smooth wrinkles. Intercostal process of prosternum almost not extending beyond posterior of coxae, steeply sloping at apex.

Elytra ovate, 1.27 times as long as wide, widest before the middle, 1.15 times as wide as pronotum. Elytral base not bordered, humeral angles rounded. Elytral surface convex, sparsely covered with very fine



Figs 39-41. 39. *Ascelosodis granata* sp. nov., male. 40. *A. zhengi* sp. nov., male. 41. *A. baingianana* sp. nov., male.

punctures and irregularly branching wrinkles on disk and granules on sides. Outer margins of epipleura not extending to shoulders. Visible abdominal ventrites smooth and sparsely punctate.

Legs short, only apices of metafemora visible from above. Outer margins of protibiae weakly serrate near the base, outer apical angles obviously elongate, extending beyond anterior margins of protarsomere 4. Length ratio of metatarsomeres 1-4 as follows: 17.0: 6.0: 6.0: 12.0.

Aedeagus (Figs. 30-32). Length 1.31 mm, width 0.24 mm (when body length 5.8 mm). Parameres 0.68 mm long, 0.20 mm wide. Apical part of parameres with two carinae in dorsal view, apex with setae. Spiculum gastrale as in Fig. 33. Apical margin of abdominal sternite VIII sinuate (Fig. 34).

Female (Figs. 35-39). Elytral surface with denser punctures. Ovipositor as in Figs. 35-36. Posterior margin of urotergite VIII (Fig. 37) with a small incision. Posterior margin of spiculum ventrale (Fig. 38) nearly straight.

Measurements. Male body length 5.8 mm, width 3.4 mm; female body length 6.1 mm, width 3.6 mm.

Holotype ♂, China, Tibet, Paingion (31°25' N, 89°56' E; alt. 4 400 m), 25 July 2004, collected by SHI Ai-Min and BA Yi-Bin. Paratype 1 ♀, same data as the holotype but 31°21' N, 90°23' E, alt. 4 450 m, 27 July 2004.

Distribution. China, Tibet (Palgon).

Diagnosis. The new species resembles *A. schmidt* Kaszab, 1965, with the following differences: anterior margin of clypeal lobe sinuate; genae widening before eyes; antennomere 3 elongate, obviously longer than antennomere 2 and antennomere 4; anterior margin of pronotum bordered along entire length.

Etymology. Named after the type locality.

Acknowledgements We are very grateful to BA Yi-Bin and YU Yang for their assistance while collecting specimens in Tibet.

REFERENCES

- Bates, F. 1879. Characters of the new genera and species of Heteromera collected by Dr. Stoliczka during Forsyth Expedition to Kashgar in 1873-74. *Cistula Entomologica*, 2: 467-484.
- Blair, K. G. 1923. Coleoptera of the Second Mt. Everest Expedition, 1922. Part II. Heteromera. *Annals and Magazine of Natural History*, 9 (11): 278-285.
- Casey, T. L. 1907. A revision of the American components of the tenebrionid subfamily Tentyriinae. *Proceedings of the Washington Academy of Sciences*, 9: 275-522.
- Doyen, J. T. 1993. Cladistic Relationships among Pimelinae Tenebrionidae (Coleoptera). *Journal of the New York Entomological Society*, 101 (4): 443-514.
- Gridelli, E. 1934. Materiali Zoologici Raccolti dalla Spedizione Italiana al Karakoram (1929 Anno VII). Coleoptera Tenebrionidae. *Atti del Museo Civico di Storia Naturale Trieste*, 12: 37-68.
- Kaszab, Z. 1959. Die Tenebrioniden Afghanistans, auf Grund der Ergebnisse der Sammelreise des Herrn J. Klappenich in den Jahren 1952/53 (Col.). *Entomologische Arbeiten aus dem Museum G. Frey*, Part I, 10 (2): 321-404.
- Kaszab, Z. 1961. Neue Tenebrioniden (Coleoptera) aus der Zoologischen Staatssammlung in München. *Mitteilungen der Münchener Entomologischen Gesellschaft*, 51: 213-230.
- Kaszab, Z. 1965. Wissenschaftliche Ergebnisse der von Dr. F. Schmid in Indien gesammelten Tenebrioniden (Coleoptera). *Miscellanea Zoologica*, 2 (1): 107-130.
- Kaszab, Z. 1968. Beiträge zur Kenntnis der Fauna Afghanistans (Sammelergebnisse von O. Jakš 1963/64, D. Povodny & Fr. Tenora 1966, J. Šimek 1965/66, D. Povodny, J. Geiser, Z. Šebek & Fr. Tenora 1967) Tenebrionidae, Col. *Časopis Moravského Muzea Moravské Liv, Vědy přírodní*, 53 (Suppl.): 7-124.
- Kaszab, Z. 1985. Drei neue Tenebrioniden (Coleoptera) aus Asien. *Bollettino di Museo Civico di Storia Naturale di Verona*, 12: 449-460.
- Kaszab, Z., Schawaller, W. and Skopin, N. G. 1978. Systematik und Ökologie einiger Tenebrionidae aus Kashmir und Ladakh (Insecta: Coleoptera). *Senckenbergiana Biologica*, 59 (3/4): 215-234.
- Koch, C. 1943. Phylogenetische, biogeographische und systematische Studien über ungeflügelte Tenebrioniden (Col. Tenebr.). IV. *Mitteilungen der Münchener Entomologischen Gesellschaft*, 33: 479-597.
- Koch, C. 1948. Beitrag zur Kenntnis der asiatischen Tentyriini (Col. Tenebr.). *Entomologische Blätter*, 41-44, 76-81.
- Redtenbacher, L. 1868. Reise der österreichischen Fregatte *Novara* um die Erde in den Jahren 1857, 1858, 1859 unter den Befehlen des Commodore B. von Wüllerstorff-Urbair. Zoologischer Theil. Zweiter Band, Coleopteren. 249 pp.
- Reinig, W. F. 1931. Entomologischen Ergebnisse der Deutsch-Russischen Alai-Pamir-Expedition 1928 (II). 5. Coleoptera II. Tenebrionidae. *Mitteilungen aus dem Zoologischen Museum Berlin*, 16: 865-912.
- Reitter, E. 1900. Bestimmungs-Tabelle der Tenebrioniden-Abtheilungen: Tentyriini und Adelostomini aus Europa und den angrenzenden Ländern. *Verhandlungen des Naturforschenden Vereines in Brunn*, 39: 82-197.
- Ren, G D and Shi, A M 2006. A taxonomic review of the Chinese species from the genus *Ascelosodis* Redtenbacher (Coleoptera: Tenebrionidae), with descriptions of three new species. *Zootaxa*, 1228: 1-24.
- Solier, A. J. J. 1835. Essai sur les Collaptes (Suite). 2^e tribu. Tentyrites. *Annales de la Société Entomologique de France*, 4: 249-419.

宽额甲属分类研究 (鞘翅目, 拟步甲科)*

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摘 要 对宽额甲属 *Ascalosoda* 昆虫进行了分类研究。描述来自中国西藏 3 新种, 即小粒宽额甲 *A. granata* sp. nov., 郑氏宽额甲 *A. zhengi* sp. nov. 和班戈宽额甲 *A. baingoinana* sp. nov.。给出了已知种名录和检索表。模式标本保存于河北大学博物馆。

1 小粒宽额甲, 新种 *A. granata* sp. nov. (图 1~ 13, 39)

新种与 *A. rugulosa* Ren et Shi, 2006 相似, 区别于后者
的主要特征: 头部刻点清晰; 触角长, 向后几乎达到前胸背板基部; 鞘翅表面光滑, 布小颗粒; 阳茎中茎短粗, 端部直截。

词源: 种名取自拉丁文 “*granata*” (多颗粒的), 指它的鞘翅表面有细颗粒。

关键词 鞘翅目, 拟步甲科, 宽额甲族, 新种, 检索表, 西藏, 中国.

中图分类号 Q969. 498. 2

2 郑氏宽额甲, 新种 *A. zhengi* sp. nov. (图 14~ 26, 40)

新种与 *A. schmidt* Kaszab, 1965 相似, 区别于后者
的主要特征: 唇基前缘明显 “V” 字形; 前颊于复眼之前变宽; 唇基基部具 2 凹; 前胸背板中部之后最宽, 前缘具完整饰边。

词源: 种名以郑哲民教授的姓氏命名, 以纪念他对中国昆虫分类学事业的贡献。

3 班戈宽额甲, 新种 *A. baingoinana* sp. nov. (图 27~ 38, 41)

新种与 *A. schmidt* Kaszab, 1965 相似, 区别于后者
的主要特征: 唇基前缘弧凹; 前颊于复眼之前变宽; 触角第 3 节延长, 明显长于第 2 节和第 4 节; 前胸背板前缘具完整饰边。

词源: 种名取自采集地——西藏班戈县。

* 本文为庆祝郑哲民教授 75 华诞暨执教 55 周年而作.